

## **DAEDONG INDUSTRIAL CO., LTD**

EXECUTIVE ORDER U-R-044-0147 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in California Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)		
2019	KDCLL02.4F7T	2.435	Diesel	8000		
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION			
Electror Turbocha	Electronic Control National Direct Injection, Period arger, Exhaust Gas Reconstants	lodule, odic Trap Oxidizer, irculation, Oxidation	Tractor, Other Industrial Equipment			

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER	EMISSION		EXHAUST (g/kw-hr)					OPACITY (%)		
CLASS	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
37 ≤ kW < 56	Tier 4 Final	STD	N/A	N/A	4.7	5.0	0.03	N/A	N/A	N/A
		CERT			4.0	0.1	0.001		-	

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this

day of December 2018.

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

FOH: U-R-044-0147

Attachment: page 1. F1

11-26-2018

## **Engine Model Summary Template**

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuet Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)		8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
KDCLL02.4F7T	4527/2600	4F243T	60.3@2600	37.5@60.3	16.15@60.3	154.8@1700	46.2@154.8	13.01@154.8	EGR, ECM, DDI, OC, PTOX, TC
KDCLL02.4F7T	5020/2600	4F243T	66.4@2600	41.0@66.4	17.66@66.4	162.2@1700	48.7@162.2	13.72@162.2	EGR, ECM, DDI, OC, PTOX, TC
KDCLL02.4F7T	5520/2600	4F243T	73.1@2600	45.7@73.1	19.69@73.1	177.3@1700	54.0@177.3	15.21@177.3	EGR, ECM, DDI, OC, PTOX, TC